

Amendments to the Specification:

Please add the following new paragraph at page 1, after the title of the application:

This application is the U.S. national phase application of PCT International Application No. PCT/GB2003/004648, filed October 30, 2003, and claims priority of British Patent Application No. 0226178.2, filed November 11, 2002.

Please add the following heading at page 1, before line 2:

FIELD OF THE INVENTION

Please add the following heading at page 1, before line 4:

BACKGROUND OF THE INVENTION

Please replace the paragraph beginning at page 3, line 11, with the following rewritten paragraph:

Catalytic distillation of hydrocarbons to remove sulphur compounds has been proposed in WO 97/03149. However in that reference the petroleum stream was subjected to hydrodesulphurisation by the catalytic distillation process, so that the organic sulphur compounds are converted to hydrogen sulphide which is separated as part of the vapour overhead stream. In contrast, in the present invention, the sulphur compounds are oxidised are and separated as part of the liquid stream.

Please add the following headings and new paragraphs at page 3, before line 17:

SUMMARY OF THE INVENTION

The present invention provides a process whereby propane and/or butanes are separated from a hydrocarbon feedstock contaminated with alkyl mercaptans by fractional distillation at such a pressure that the separated overheads stream containing said propane and/or butanes is at a temperature in the range 50 to 100°C. Sufficient oxygen is introduced into the hydrocarbon feedstock to oxidise the mercaptans therein and the resultant mixture is subjected

to the fractional distillation in a column including at least one bed of a catalyst capable, under the prevailing conditions, of oxidising mercaptans to higher boiling point sulphur compounds. These higher boiling point sulphur compounds are separated as part of the liquid phase from the distillation.

BRIEF DESCRIPTION OF THE DRAWING

Figure 1 is a schematic diagram flow sheet of one embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

Please replace the paragraph beginning at page 3, line 17, with the following rewritten paragraph:

~~Accordingly, the~~ The present invention provides a process for the separation of a stream containing propane and/or butanes from a hydrocarbon feedstock contaminated with alkyl mercaptans by fractional distillation at such a pressure that the separated overheads stream containing said propane and/or butanes is at a temperature in the range 50 to 100°C, comprising introducing sufficient oxygen into said hydrocarbon feedstock to oxidise the mercaptans therein and subjecting the resultant mixture to the fractional distillation column including at least one bed of a catalyst capable, under the prevailing conditions, of oxidising mercaptans to higher boiling point sulphur compounds, and separating the higher boiling point sulphur compounds as part of the liquid phase from the distillation.

Please replace the paragraph beginning at page 4, line 23, with the following rewritten paragraph:

~~In~~ the drawing Figure 1 there is shown a de-butaniser fractional distillation column 10 used for the separation of butanes from the liquid hydrocarbon stream from de-propaniser. The liquid hydrocarbon stream 12 is supplied to the column at a location part way up the column. Typically the column may have 20 or more stages and typically at least a third, preferably at least half, but not more than three quarters, of the stages will be below the location at which the feed is supplied. The column is provided at its lower end with a liquid offtake 14. Part of the liquid hydrocarbon stream removed from the bottom of the column is heated in a reboiler

16 and recycled to the lower end of the column via line 18. The remainder of the liquid stream from the lower end of the column constitutes a gasoline stream.